

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-15 are pending. Claims 1, 2, 4, 7-13 have been amended by the present amendment. The amendments to the claims are supported by at least pages 11-20 of the originally filed specification and do not add new matter.

In the outstanding Office Action, Claims 7, 8, 9, 14, and 15 were objected to because of minor informalities. Claims 1, 5, and 13 were rejected under 35 U.S.C. §102(b) as being anticipated by European Patent Application No. EP 0963129 to Kawabata et al. (hereinafter referred to as "Kawabata"). Claims 6 and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kawabata in view of U.S. Patent No. 6,266,330 to Jokinen et al. (hereinafter referred to as "Jokinen"). Claims 2-4, 7, and 10-12 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants acknowledge with appreciation the indication of allowable subject matter.

Regarding objections to claims 8, 9, 14, and 15 Applicants clarify that the mobile station uses a directional antenna. The Applicants specification on at least page 25, lines 29-32 provides support.

Applicants respectfully submit that amended independent Claims 1 and 13 recite novel features that are not taught or rendered obvious by the applied references.

Claim 1 is directed to a communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same

frequency by radiating radio wave beams to the mobile stations. The method includes the steps of controlling first timing at which a base station radiates a first radio wave beam such that the timing is different from second timing at which another base station radiates a radio wave beam which may cause interference with the first radio wave beam.

Turning to the applied reference, Kawabata describes a radio communication system in which each base station and terminal station have directional antennas. The base stations transmit direction-determining radiation patterns for setting a direction of an antenna according to a timing. A communication slot is allocated to each base station based on each timing. Kawabata teaches the use of broadcasting channels to determine the directions and radiation timings of radio wave beams radiated from each base station (column 9, lines 51-58, column 10, lines 1-12). Each operating base station transmits a direction-determining pattern on the broadcast channel associated with the radio wave timing. A base station may establish timing by observing each slot of the broadcast channels. The base station may select a broadcasting channel receiving the least interference, and transmit its radio wave beam based on the timing slot associated with the selected broadcasting channel.

However, Kawabata fails to teach or suggest the features of amended Claim 1 directed to: (1) receiving at a control station from a base station, radiation timing information for radiating a radio wave beam in a direction, (2) controlling based on said received radiation timing information, first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam, (3) sending updated radiation timing information from the control station to the base station.

In the Applicants' invention, a control station manages the directions and radiation timings of radio wave beams radiated from each base station on the basis of prediction of

interference caused by radio wave beams. The control station makes a determination of radiation timings without monitoring interference patterns transmitted by base stations. Further, the control station is responsible for allocating timing slots to base stations.

Kawabata does not teach or suggest a control station that communicates with base stations, for purposes of predicting interference and managing the directions and radiation timings of radio wave beams to avoid interference. Instead, in Kawabata, the base stations are responsible for determining radiation timings, by sending direction-determining patterns on broadcast channels and monitoring the channels. The timing slot associated with the broadcast channel with the least interference may be selected by the base station.

Therefore, Applicants respectfully submit that Kawabata does not anticipate Claim 1 and therefore the rejection of Claim 1 (and dependent Claims 2-12) should be withdrawn.

Amended Claim 13 recites limitations analogous to the limitations recited in amended Claim 1. Accordingly, for reasons stated above for the patentability of Claim 1, Applicants respectfully submit that the rejection of Claim 13 should also be withdrawn.

Applicants note that Claim 7 is indicated as allowable, while at the same time was rejected under 35 U.S.C. §103(a). However, Claim 7 depends from Claim 1 which Applicants submit as being allowable, thus Claim 7 is allowable.

The Office Action did not address the patentability of Claims 14 and 15. Applicants respectfully submit that amended Claims 14 and 15 defines patentably over the prior art of record. Thus, Claims 14 and 15 should be made allowable.

Consequently, in view of the present amendment and in light of the above discussion the outstanding grounds for rejection are believed to have been overcome. The application as

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amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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